

IMAGE COMPRESSION AND EXPANSION APPARATUS AND PIXEL NUMBER
INCREASING APPARATUS

ABSTRACT OF THE DISCLOSURE

An image compression and expansion apparatus reproduces an expanded image corresponding to an original image from a reduced image. The original image data is comprised of approximately 1000 x 600 pixel values Pyx. A first matrix M1 comprised of 64 x 64 pixel values Pyx is extracted from the original image data. Regarding the original image data arranged in the first matrix M1, an average value of 8 x 8 pixel values Pyx forming a block B1 is obtained, and thus a second matrix M2 is generated using the average value as a single pixel value. The pixel values of the second matrix M2 is subject to two dimensional discrete cosine transformation to obtain a matrix MD comprised of 8 x 8 DCT coefficients. Expanded two dimensional inverse discrete cosine transformation is applied to the matrix MD to obtain a third matrix M3 comprised of 64 x 64 pixel values. The expanded image data comprising the third matrix M3 is transformed to the same coordinate system as the original image data and recorded on to the recording medium.